Process Improvement Initiatives for Psychiatric Patients in the Emergency Department: Seven Steps to a Safer and More Efficient Emergency Department

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Objectives

- Understand a system-level approach to addressing the problem of boarding of psychiatric patients in the ED

- Identify specific initiatives to make an immediate impact in regards to improving safety & throughput for psychiatric patients in the ED

The Problem

Increased volume of psychiatric patients in the ED

Increased safety events & decreased throughput

The Problem: Boarding of Psychiatric Patients in the ED

- Between 2002-2011, the number of psychiatric patients boarding in the ED increased by 55% (4.8 million to 6.8 million)
- ED BH volume has outpaced all ED growth
  - Medicaid expansion contributed to rapid increase in BH volume in the ED
  - In FY15, >21,000 BH visits in Central Ohio Market

    (37% OH, 29% MCHS, 34% OSU)
  - FY12-FY15, OhioHealth BH ED volume grew 4.7%, while total ED grew 3.9%

The Problem: Boarding of Psychiatric Patients in the ED

- The increased market for BH services in the ED has resulted in throughput and safety issues
- In 2011, the 90th percentile LOS
  - For **psychiatric** patients: **1378** minutes
  - For **non-psychiatric** patients: **543** minutes
- Violent patient incidences grew 5% from CY14-15; compromises patients/associates/physicians safety

The Problem: Boarding of Psychiatric Patients in the ED

A psychiatric patient boarding in an ED can cost the hospital more than $100 per hour in lost income alone

****Average cost to an ED to board a psychiatric patient estimated at $2,264**

The Solution: Central Ohio Behavioral Health Task Force

- Established in November 2015 to address the problem of high volume psychiatric patients in the ED
- Made up of OhioHealth administrators, clinicians, support staff, legal advisors, statisticians
- Goals
  1. Develop strategies to **improve safety** for ED staff & psychiatric patients boarding in the ED
  2. **Optimize throughput** of patients presenting to the ED with psychiatric complaints

OhioHealth: a not-for-profit system of hospitals & healthcare providers in central Ohio

Riverside Methodist Hospital:

765 bed general medical & surgical hospital referral center in central Columbus

(88,093 ED visits/year)

Grant Medical Center:

427 bed medical & surgical hospital level I trauma center in downtown Columbus

(88,273 ED visits/year)

Doctors Hospital:

243 bed medical & surgical hospital in west Columbus

(83,619 ED visits/year)

Stepwise Implementation at Three Central Locations

2015

- Process improvement begins at Riverside Methodist
  - Based on specific identified “problems”
- Virtual Health (VH) pilot begins at Doctors Hospital

2016

- VH metrics evaluated; areas for improvement identified
- Virtual Health pilot expanded to Grant Medical Center

2017

- Continued program evaluation
- Determination of best practices
- Expansion to other sites

Central Hypotheses:

Improved access to psychiatrist evaluation and re-initiation of home medications will:

- Reduce the number of inappropriate admissions
- Decrease length of stay (LOS) in the ED
- For those admitted, reduce the time to transfer to inpatient and reduce the LOS in the inpatient unit

Improved staff training/teamwork and facility improvements will:

- Reduce the number of staff assaults

Step 1:

Process Improvement at Riverside

Identify Modifiable Factors

- Lack of structured patient management
- Daily re-initiation of home medications for psychiatric patients boarding in the ED
- No PRN Medications Ordered for Agitated Psychiatric Patients in ED
- High risk patients>safety events

Problem: Lack of structured patient management

- Medical problems arise once ED physician has “signed off” on patient
- Nurses without clear guidance in regards to medication, medical issues e.g. withdrawal
- Changes in potential disposition during boarding time in ED

Multidisciplinary Daily Rounds

Fix: Daily Multidisciplinary Rounds on Psych ED patients

- Optimal accountability for all aspects of patient care
- Daily “check-in”
- Staff feel more supported
- Provides for more organized & efficient patient care

Multidisciplinary Daily "Psych ED" Rounds

- Daily M-F
- ~15-60 minutes
- Modeled after "ICU rounds" in an academic setting with interactive teaching
- Each patient is discussed with input from all team members
  - Nursing staff
  - Pharmacist
  - Psychiatric Social Services (LISW)
  - Psychiatrist
  - Protective Services
  - ED Psych Nurse Manager

Problem: Delay in re-initiation of home medications for psychiatric patients boarding in ED

- Delay in home medication verification process leads to missed opportunity for active treatment in ED
- Higher likelihood of safety events without active treatment

Prioritization of Medication Reconciliation Process for Psychiatric Patients

Fix: Prioritization of Medication Reconciliation Process for Psychiatric Patients in ED

- PSS (Psychiatric Social Services) consult order triggers prioritized med reconciliation
- Pharmacy technician prioritizes med reconciliation for psychiatric patients
- Once home medications are verified, pharmacy tech contacts ED physician to order meds

Problem: No PRN Medications Ordered for Agitated Psychiatric Patients in ED

- Concern of ED physician for adverse cardiac effects in absence of EKG
- Fear of “overuse” of PRN medication e.g. benzos
- Lack of comfort in prescribing psychotropic medication

Agitation Management Protocol

Fix: Order set for evidence-based agitation management

- Protocol for Treatment of Agitation from AAEP Project Beta Psychopharmacology Workgroup Identified
- Agitation Management Protocol translated into user-friendly order set in EPIC (EMR) for ED physician use

Hold

- Department Consult to PSYCH - Social Services
- d
- SS Precautions

on Associated With Delirium

- ssociated with delirium: ETOH or BZN withdrawal NOT suspected
- ssociated with delirium: ETOH or BZN withdrawal IS suspected

on Due To Intoxication

- e to intoxication: CNS Stimulant (e.g. amphetamines, bath salts)
- e to intoxication: CNS Depressant (e.g. ETOH)

on w/ Psychosis : Known Psychiatric Disorder (NO ation or Delirium)

- / Ativan 1mg IM
- g / Ativan 2mg IM
- / Ativan 1mg IV
- / Ativan 2mg IV
- mg / Ativan 1mg IM
- mg / Ativan 2mg IM
- n (ATIVAN) tablet
- (HALDOL) tablet
- e (ZYPREXA) tablet
- e (ZYPREXA) injection IM

on: Etiology Unknown

- sis Evident
- Evident

ose

- NARCAN)
- harcoal (ACTIDOSE-AQUA) suspension

ECG / EKG

- [ ] ECG 12 Lead
- [ ] Repeat ECG

Imaging

- [ ] CT Head Or Brain Without Contrast

Labs

- [ ] POC Glucose
- [ ] CBC and Differential
- [ ] Basic Metabolic Panel
- [ ] Comprehensive Metabolic Panel
- [ ] AST
- [ ] ALT
- [ ] GGT
- [ ] Troponin
- [ ] TSH
- [ ] Drugs of Abuse Screen, Urine
- [ ] Alcohol, Medical
- [ ] Salicylate Level
- [ ] Acetaminophen Level
- [ ] Valproic Acid Level
- [ ] Phenytoin Level, Total
- [ ] Lithium Level
- [ ] Phenobarbital Level
- [ ] Carbamazepine Level, Total
- [ ] Tricyclics Screen, Urine
- [ ] Urinalysis
- [ ] POC Urinalysis Dipstick,Non-auto
- [ ] hCG Urine, Qualitative
- [ ] POC Pregnancy, Urine

ED Behavioral Health Huddle Board

What:

Provide consistent safe PSS patient handoff 24/7

Why:

Increase staff accountability for following the "*Behavioral Health At Risk Policy*"

Where: Huddle Board

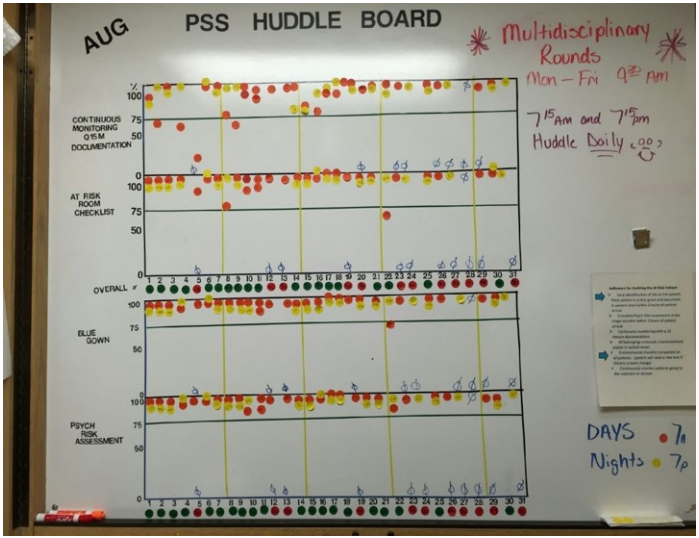
Who: Nurses

When: 7:15 am & 7:15 pm

ED Behavioral Health Huddle Board

Goal: Improve documentation

- Early identification of the at risk patient within 2 hours of arrival
- Complete & document psych risk assessment within 2 hours of arrival
- Complete environment checklist on arrival or with room change
- Door to continuous monitoring q15 min with documentation



Structural Improvements

Problem: High risk patients>safety events

Fix: 24/7 Protective Services Officer

Problem: Variable volume of psychiatric patients

Fix: Convertible rooms with garage doors

Problem: Elopement

Fix: Delayed Egress Doors to block off area for Psychiatric patients in ED

Structural improvements for optimization of safety

- Delayed egress doors
- Garage doors for convertible rooms
- 24/7 Protective Services

Increased staffing

- 3rd PSS (Psychiatric Social Services) LISW for high volume shifts
- Psychiatrist FTE time dedicated to ED

Step 2:

Virtual Health Pilots

Problem: Limited access to psychiatrist at other campus Emergency Departments

- Increased unnecessary admissions
- Lack of active treatment of psychiatric patients boarding in ED

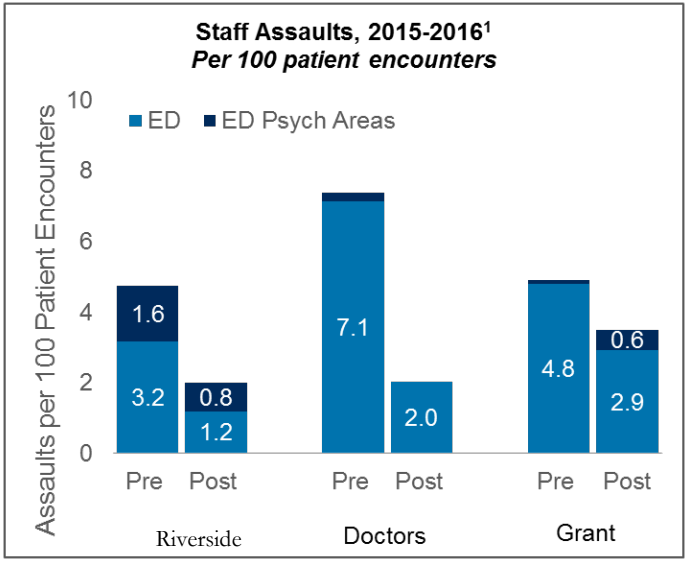
Fix: Telemedicine Pilot to Grant & Doctors ED

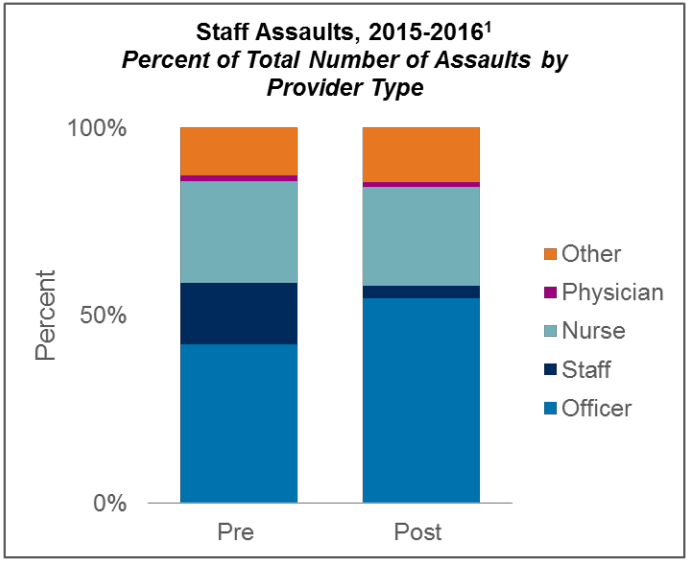
- Psychiatrist does telemedicine consult for psychiatric patients boarding in ED >24h
- Assistance with difficult disposition
- “Pink slip reversal” (overturning of involuntary commitment order)

Interim Summary

- Behavioral Health Task Force Established Two Primary Goals
  1. Reduce staff assaults
  2. Reduce length of stay
- Process improvements, including virtual consults, implemented across central Ohio locations

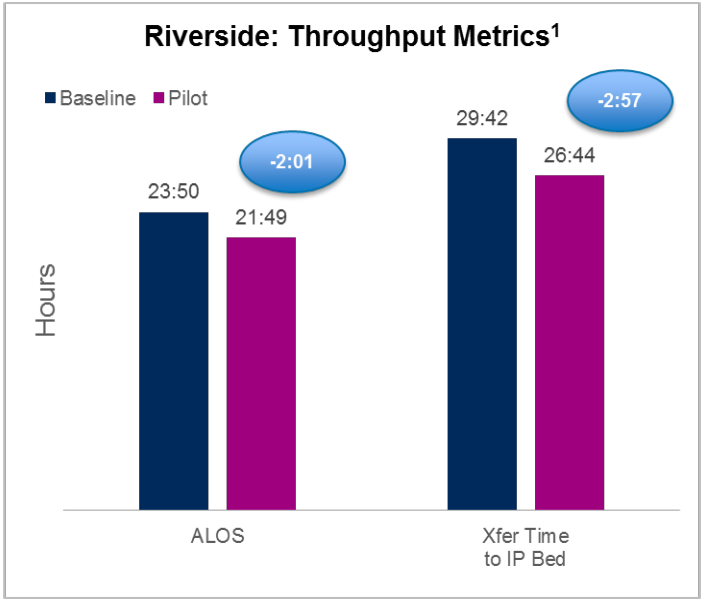
Staff Assaults Reduced by Half System-Wide





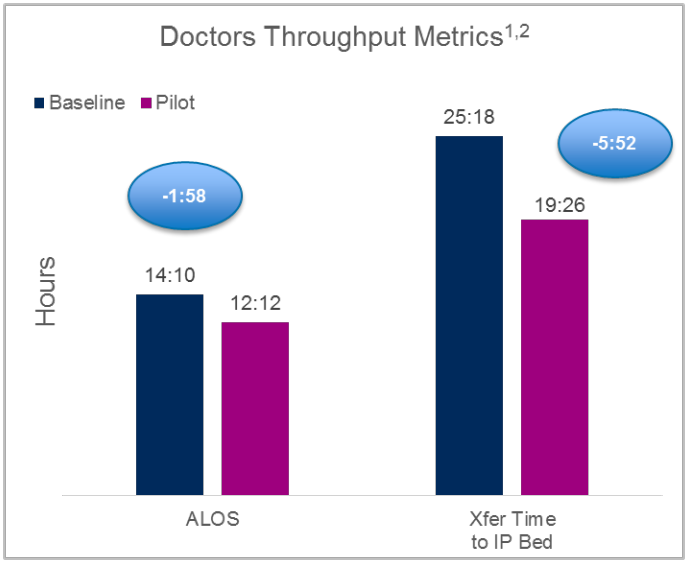
- Model Date Range: 11/2015 – 1/2017
- 53% reduction in assaults system-wide
- Assaults shift from staff to officers, who are better trained to handle assaults

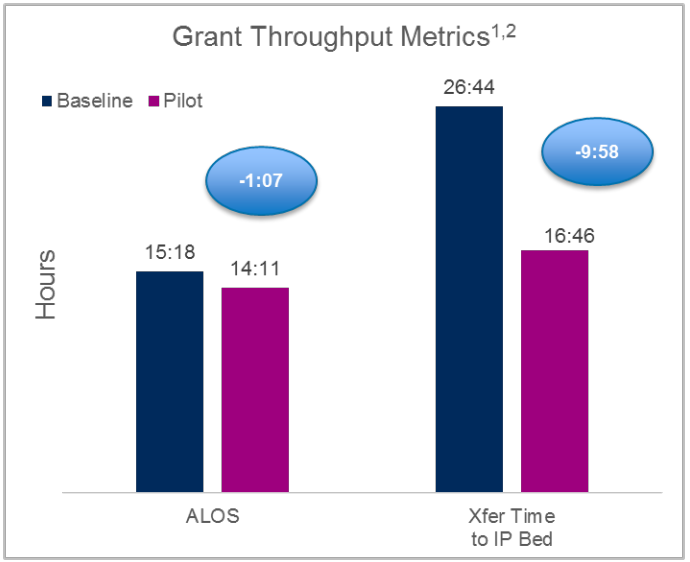
Reduced Length of Stay at Riverside



- Model Date Range: 11/2015 – 1/2017
- 8% decrease in ALOS
- 6% decrease in ALOS for D/C pts
- 10% decrease in time to IP Bed

Reduced Length of Stay at Doctors & Grant

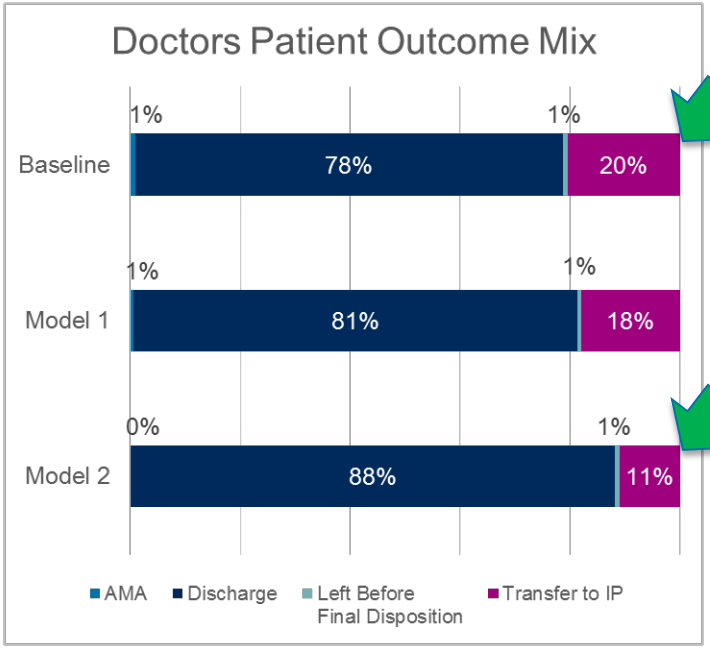


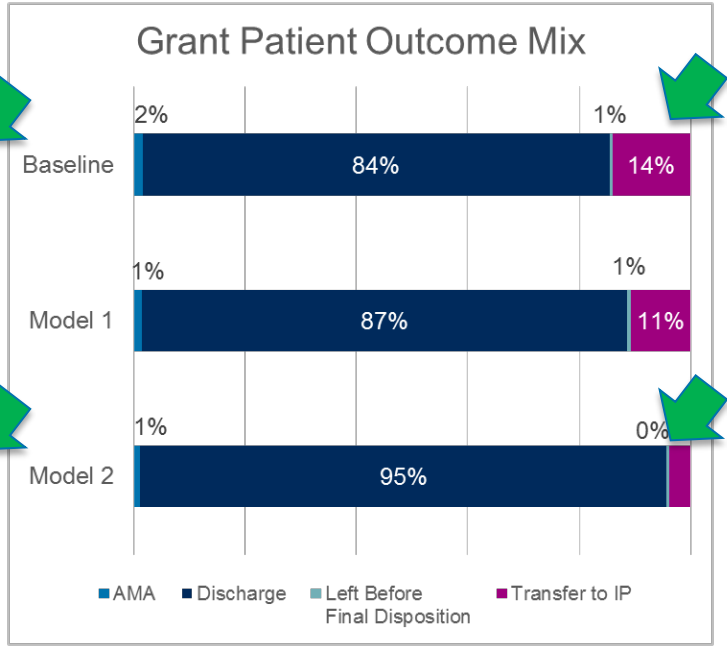


- Model Date Range: 8/2016 – 10/2016
- 14% decrease in ALOS
- 1% decrease in ALOS for D/C pts
- 23% decrease in time to IP Bed

- Model Date Range: 8/2016 – 10/2016
- 7% decrease in ALOS
- 1% decrease in ALOS for D/C pts
- 37% decrease in time to IP Bed

Virtual Psychiatry Consult Reduces Unnecessary IP Psych Admissions





The result shows a shift of patients being discharged (-10 % point at DH, -11% point GMC) instead of admitted to any Columbus hospital.

Summary

- Increased volume of psychiatric patients in the ED can negatively impact safety & throughput
- A multi-step approach to providing more efficient care for psychiatric patients in the ED can improve both safety & throughput
  1) Multidisciplinary daily rounds
  2) Prioritization of medication reconciliation process
  3) Agitation management protocol for ED providers
  4) Nursing huddle board
  5) Structural improvements
  6) Protective Services Officer presence
  7) Virtual Health Psychiatric ED Consultation Services

Questions?

Thank you

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